

FIG. 1

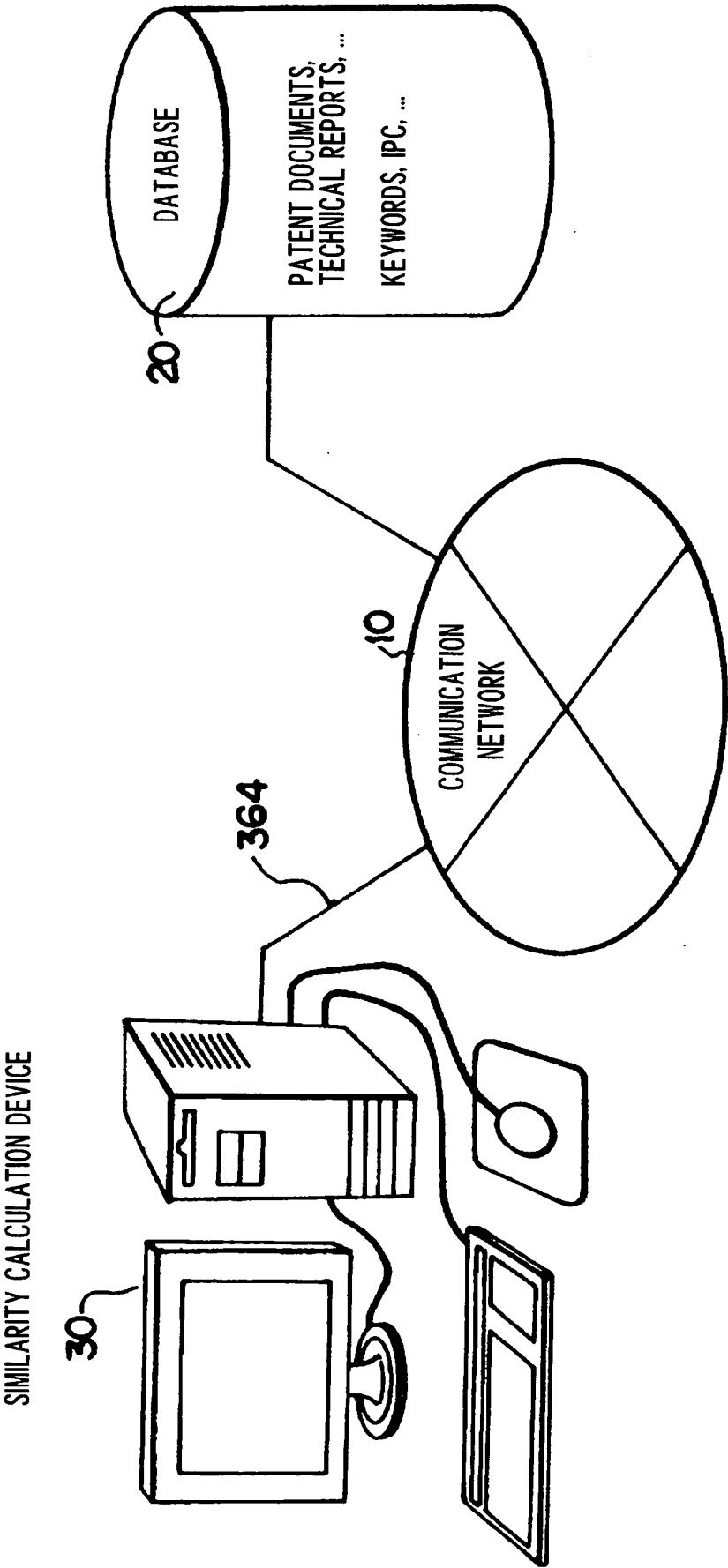


FIG. 2

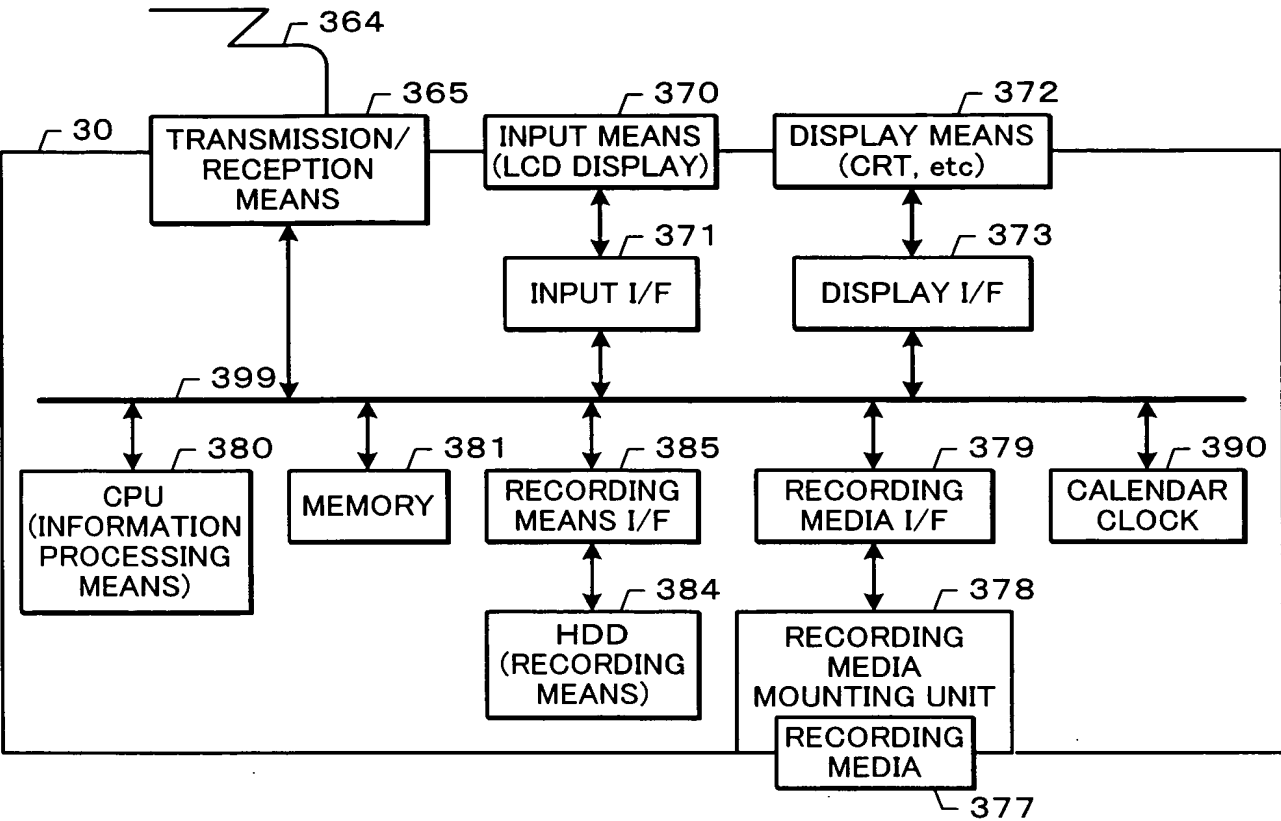


FIG. 3

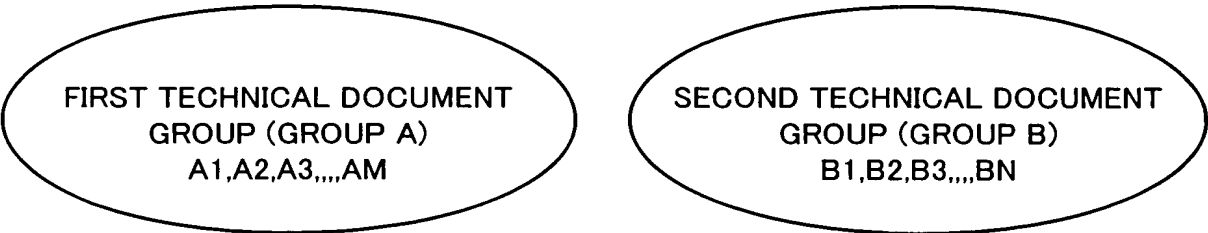


FIG. 4

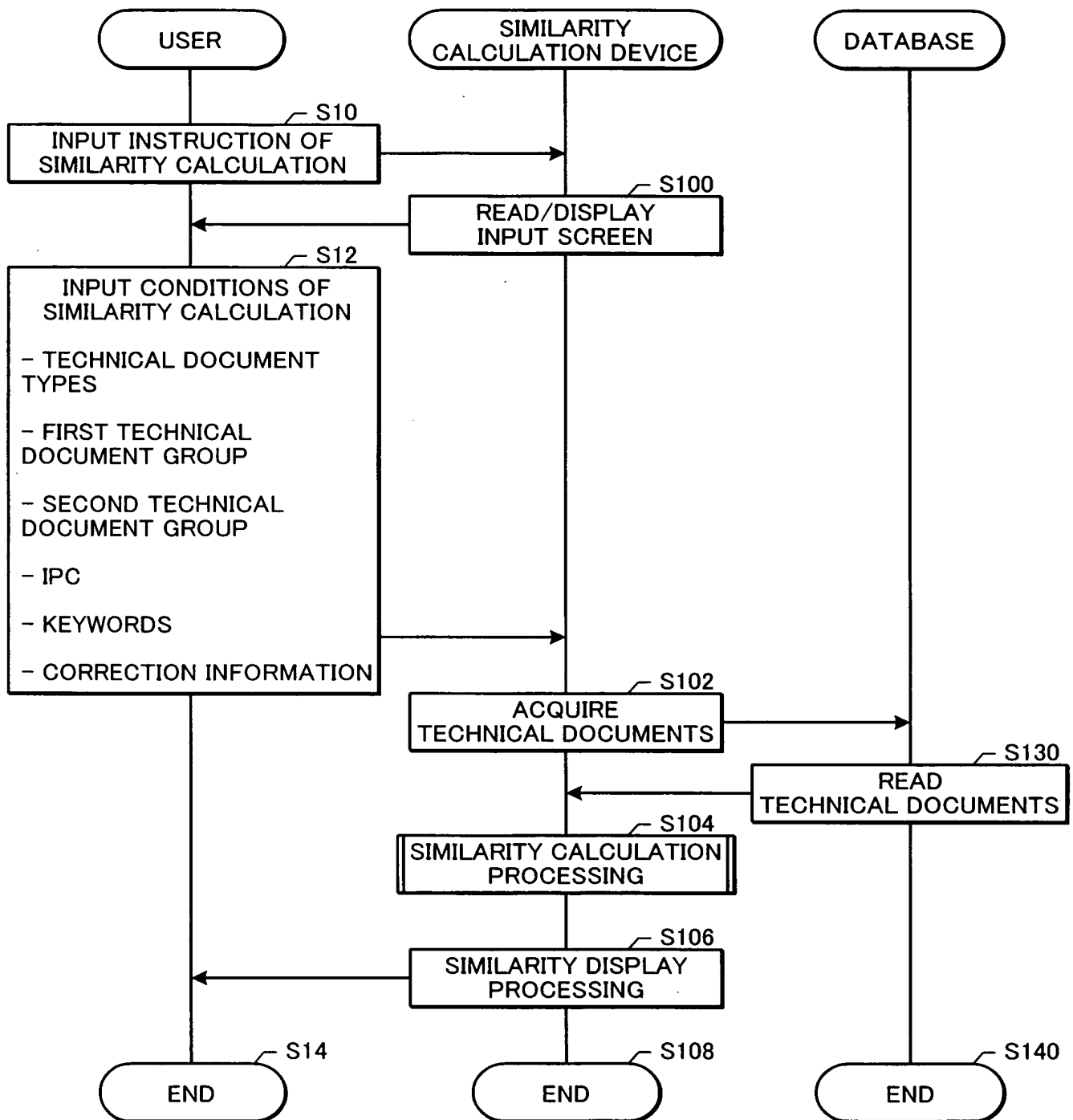


FIG. 5

- INPUT SCREEN -

1. INPUT CLUSTER ANALYSIS CONDITIONS

(1) DOCUMENTS FOR PROCESSING

	▼
1. PATENT PUBLICATIONS	
2. TECHNICAL DOCUMENTS	
:	
:	
:	
3. ALL DOCUMENTS	

(2) PORTIONS FOR PROCESSING

	▼
1. ENTIRE TEXT	
2. CLAIMS ONLY	
:	
:	
:	
:	

(3) CRITERIA FOR CLUSTER ANALYSIS

	▼
1. IPC " "	
2. KEYWORD " "	
:	
:	
:	
:	

2. DOCUMENT GROUPS EXTRACTION CONDITIONS

FIRST DOCUMENT GROUP

(1) TIME PERIOD

☒ DATES 03/06/13 ▼ 03/09/11 ▼
☐ LAST — ▲ MONTHS
☐ LAST — ▲ DAYS

SECOND DOCUMENT GROUP

(1) TIME PERIOD

☐ DATES 03/09/11 ▼ — ▼
☒ LAST 6 ▲ MONTHS
☐ LAST — ▲ DAYS

(2) INDUSTRY

SELECT FROM BELOW	▼
1. TELECOMMUNICATION	
2. ELECTRIC APPLIANCE	
3. FINANCE	
4. ...	

(2) INDUSTRY

SELECT FROM BELOW	▼
1. TELECOMMUNICATION	
2. ELECTRIC APPLIANCE	
3. FINANCE	
4. ...	

(3) NAME OF COMPANY/INDIVIDUAL

SELECT FROM BELOW	▼
1. COMPANY ○○○○	
2. COMPANY △△△△	
3. ...	
4. ...	

(3) NAME OF COMPANY/INDIVIDUAL

SELECT FROM BELOW	▼
1. COMPANY ○○○○	
2. COMPANY △△△△	
3. ...	
4. ...	

3. CORRECTION METHOD

CORRECTION TERM 1

2. NUMBER OF DOCUMENTS	▼
1. NONE	
2. NUMBER OF DOCUMENTS	
3. ...	
4. ...	
5. ...	

CORRECTION TERM 2

4.EXPECTATION VALUE DIFFERENCE	▼
1. NONE	
2. PROBABILITY	
3. INTERMIXING RATIO	
4.EXPECTATION VALUE DIFFERENCE	
5. ...	

FIG. 6

- SIMILARITY DISPLAY SCREEN -

1. CLUSTER ANALYSIS CONDITIONS

1. PATENT PUBLICATIONS, 2. TECHNICAL DOCUMENTS,
7. KEYWORD "TELEPHONE", ...

2. DOCUMENT GROUPS EXTRACTION CONDITIONS

FIRST DOCUMENT GROUP

(1) TIME PERIOD	03/06/13 - 03/09/11
(2) INDUSTRY	1. TELECOMMUNICATION
(3) NAME OF COMPANY	1. COMPANY ○○○○
(4) OTHERS	

SECOND DOCUMENT GROUP

(1) TIME PERIOD	03/06/13 - 03/12/13
(2) INDUSTRY	2. ELECTRIC APPLIANCE
(3) NAME OF COMPANY	2. COMPANY △△△△
(4) OTHERS	

3. CONDITIONS OF CORRECTION METHOD

CORRECTION TERM 1 = 2, CORRECTION TERM 2 = 4,
CORRECTION TERM 3 = 0.300

4. SIMILARITY CALCULATION RESULT

SIMILARITY	0.935
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5. CONTENTS OF CLUSTERS OBTAINED

	CLUSTER 1	CLUSTER 2
CRITERIA	G06F17/30	TEXT PROCESSING
CORRECTION TERM 1	3.774	0.075
CORRECTION TERM 2	0.971	0.971
CORRECTION TERM 3	1.000	1.000

6. CONDITIONS OF SIMILARITY CALCULATION

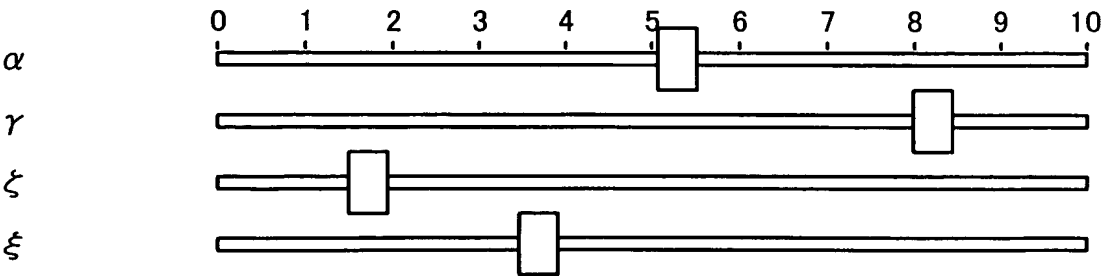


FIG. 7

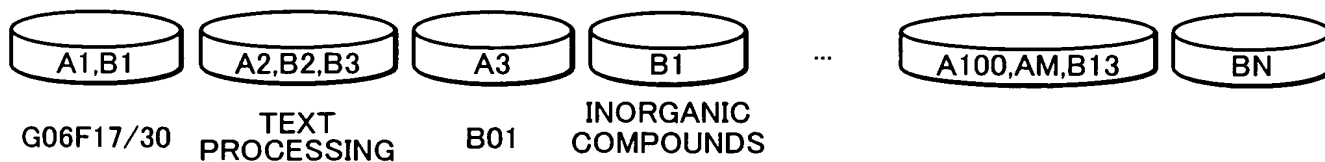


FIG. 8

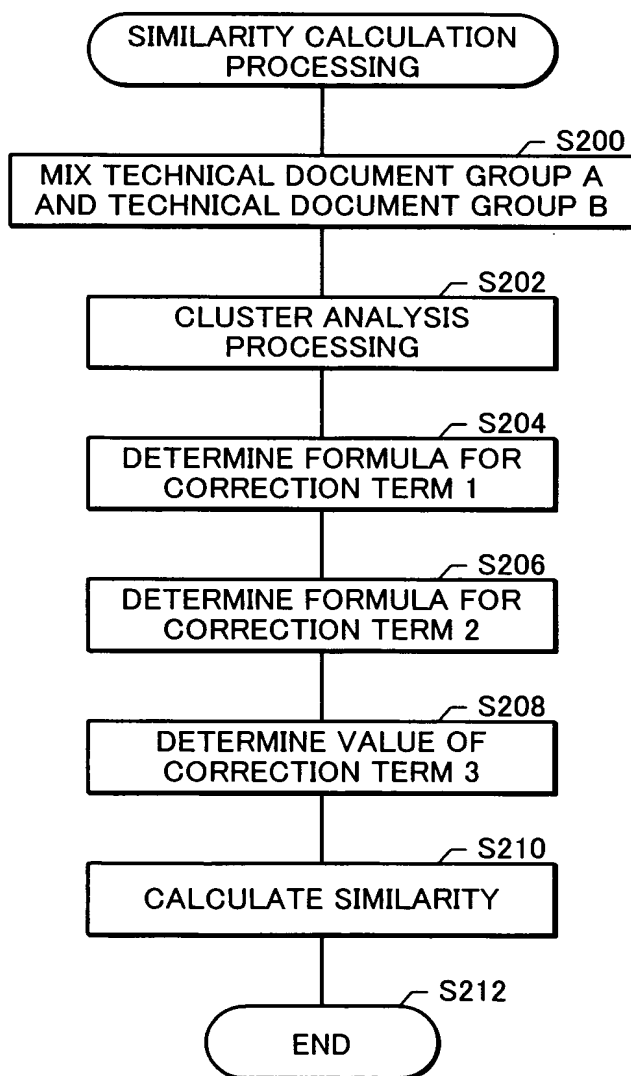


FIG. 9

CONDITIONS		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
FIRST TECHNICAL DOCUMENT GROUP	NUMBER OF TECHNICAL DOCUMENTS M	6	104	104	104
SECOND TECHNICAL DOCUMENT GROUP	NUMBER OF TECHNICAL DOCUMENTS N	6	55	55	55
TOTAL NUMBER OF TECHNICAL DOCUMENTS		12	159	159	159
CLUSTER 1	NUMBER OF TECHNICAL DOCUMENTS m1	2	100	20	2
	NUMBER OF TECHNICAL DOCUMENTS n1	1	50	50	50
	TOTAL NUMBER OF TECHNICAL DOCUMENTS	3	150	70	52
CLUSTER 2	NUMBER OF TECHNICAL DOCUMENTS m2	2	2	2	20
	NUMBER OF TECHNICAL DOCUMENTS n2	1	1	1	1
	TOTAL NUMBER OF TECHNICAL DOCUMENTS	3	3	3	21
CLUSTER 3	NUMBER OF TECHNICAL DOCUMENTS m3	2	2	82	82
CLUSTER 4	NUMBER OF TECHNICAL DOCUMENTS n4	4	4	4	4
EXPECTED SIMILARITY VALUE	TOLERANCE ± 0.050	0.300	0.900	0.200	0.050

FIG. 10

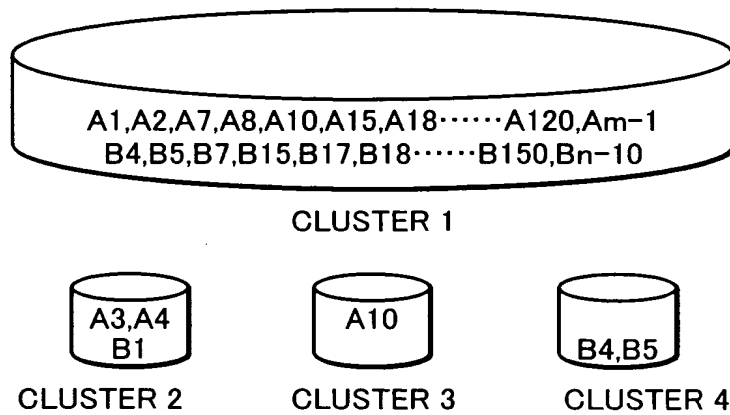


FIG. 11

SIMILARITY CALCULATION EXAMPLES BY EQUATION 4
WHEN $\alpha=1$, CORRECTION TERM 2=1, CORRECTION TERM 3=1

SIMILARITY CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
$(M+N)/4$		12/4	159/4	159/4	159/4
CLUSTER 1	NUMBER OF TECHNICAL DOCUMENTS (m_1+n_1)	3	150	70	52
	VALUE OF CORRECTION TERM 1	1	3.774	1.761	1.308
CLUSTER 2	NUMBER OF TECHNICAL DOCUMENTS (m_2+n_2)	3	3	3	21
	VALUE OF CORRECTION TERM 1	1	0.075	0.075	0.528
SIMILARITY (EQUATION 4)		0.5	0.962	0.459	0.459

FIG. 12

SIMILARITY CALCULATION EXAMPLES BY EQUATION 10
WHEN $\gamma=1$, CORRECTION TERM 1=1, CORRECTION TERM 3=1

SIMILARITY CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
CLUSTER 1	INTERMIXING PROBABILITY	0.409	0.113	0.000	0.000
	MAXIMUM VALUE OF INTERMIXING PROBABILITY	0.409	0.280	0.133	0.141
	VALUE OF CORRECTION TERM 2(1)	1	0.404	0.000	0.000
CLUSTER 2	INTERMIXING PROBABILITY	0.409	0.448	0.448	0.001
	MAXIMUM VALUE OF INTERMIXING PROBABILITY	0.409	0.448	0.448	0.194
	VALUE OF CORRECTION TERM 2(1)	1	1	1	0.004
SIMILARITY (EQUATION 10)		0.5	0.351	0.25	0.001

FIG. 13

SIMILARITY CALCULATION EXAMPLES WHEN ADOPTING
CORRECTION TERM 1(1) AND CORRECTION TERM 2(1)

SIMILARITY CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
CLUSTER 1	VALUE OF CORRECTION TERM 1	1	3.774	1.761	1.308
	VALUE OF CORRECTION TERM 2(1)	1	0.404	0.000	0.000
	CORRECTION TERM 1 \times CORRECTION TERM 2(1)	1	1.525	0.000	0.000
CLUSTER 2	VALUE OF CORRECTION TERM 1	1	0.075	0.075	0.528
	VALUE OF CORRECTION TERM 2(1)	1	1	1	0.004
	CORRECTION TERM 1 \times CORRECTION TERM 2(1)	1	0.075	0.075	0.002
SIMILARITY (CORRECTION TERM 1 \times CORRECTION TERM 2(1))		0.5	0.4	0.019	0.0005

FIG. 14

SIMILARITY CALCULATION EXAMPLES BY EQUATION 26
WHEN $\xi=1$, CORRECTION TERM 1=1, CORRECTION TERM 3=1

SIMILARITY CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
N/M		1	0.529	0.529	0.529
CLUSTER 1	n1/m1	0.5	0.5	2.5	25
	VALUE OF CORRECTION TERM 2(2)	0.5	0.945	0.212	0.021
CLUSTER 2	n2/m2	0.5	0.5	0.5	0.05
	VALUE OF CORRECTION TERM 2(2)	0.5	0.945	0.945	0.095
SIMILARITY (EQUATION 26)		0.25	0.473	0.289	0.029

FIG. 15

SIMILARITY CALCULATION EXAMPLES WHEN ADOPTING
CORRECTION TERM 1(1) AND CORRECTION TERM 2(2)

SIMILARITY CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
CLUSTER 1	VALUE OF CORRECTION TERM 1	1	3.774	1.761	1.308
	VALUE OF CORRECTION TERM 2(2)	0.5	0.945	0.212	0.021
	CORRECTION TERM 1 \times CORRECTION TERM 2(2)	0.5	3.566	0.373	0.027
CLUSTER 2	VALUE OF CORRECTION TERM 1	1	0.075	0.075	0.528
	VALUE OF CORRECTION TERM 2(2)	0.5	0.945	0.945	0.095
	CORRECTION TERM 1 \times CORRECTION TERM 2(2)	0.5	0.071	0.071	0.050
SIMILARITY (CORRECTION TERM 1 \times CORRECTION TERM 2(2))		0.25	0.909	0.111	0.019

FIG. 16

EXPECTATION VALUE DIFFERENCE CALCULATION EXAMPLES
WHEN CONDITIONS 1-4 ARE SUBSTITUTED INTO EQUATION 31

EXPECTATION VALUE DIFFERENCE CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
CLUSTER 1	$n1 \times M$	6	5,200	5,200	5,200
	$m1 \times N$	12	5,500	1,100	110
	EXPECTATION VALUE DIFFERENCE	0.5	1.887	25.786	32.013
CLUSTER 2	$n2 \times M$	6	104	104	104
	$m2 \times N$	12	110	110	1,100
	EXPECTATION VALUE DIFFERENCE	0.5	0.038	0.038	6.264

FIG. 17

SIMILARITY CALCULATION EXAMPLES BY EQUATION 32
WHEN $\xi = 10$, CORRECTION TERM 1=1, CORRECTION TERM 3=1

SIMILARITY CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
CLUSTER 1	EXPONENT FOR ξ	0.167	0.013	0.368	0.616
	VALUE OF CORRECTION TERM 2(3)	0.681	0.971	0.429	0.242
CLUSTER 2	EXPONENT FOR ξ	0.167	0.013	0.013	0.298
	VALUE OF CORRECTION TERM 2(3)	0.681	0.971	0.979	0.504
SIMILARITY (EQUATION 32)		0.340	0.485	0.350	0.187

FIG. 18

**SIMILARITY CALCULATION EXAMPLES WHEN ADOPTING
CORRECTION TERM 1(1) AND CORRECTION TERM 2(3)**

SIMILARITY CALCULATION EXAMPLES		CONDITION 1	CONDITION 2	CONDITION 3	CONDITION 4
CLUSTER 1	VALUE OF CORRECTION TERM 1	1	3.774	1.761	1.308
	VALUE OF CORRECTION TERM 2(3)	0.681	0.971	0.429	0.242
	CORRECTION TERM 1 × CORRECTION TERM 2(3)	0.681	3.665	0.755	0.317
CLUSTER 2	VALUE OF CORRECTION TERM 1	1	0.075	0.075	0.528
	VALUE OF CORRECTION TERM 2(3)	0.681	0.971	0.971	0.504
	CORRECTION TERM 1 × CORRECTION TERM 2(3)	0.681	0.073	0.073	0.266
SIMILARITY (CORRECTION TERM 1 × CORRECTION TERM 2(3))		0.340	0.935	0.207	0.146

FIG. 19

